

IN THE SPECIFICATION

Please replace the specification with the double-spaced specification attached hereto captioned "Substitute Specification". References in this section to amendments to page and line numbers in the specification refer to the Substitute Specification.

Please replace the paragraph ~~beginning~~ at page 6, line 12 with the following rewritten paragraph:

--In a procedural model, a surface in 3-dimensional space is defined in a parametric form by a function s from \mathbb{R}^2 to \mathbb{R}^3 , which maps points from a 2-dimensional domain space (u,v) to a 3-dimensional image space (x,y,z) . The parametric form for a surface may be expressed as:

$$s(u,v) = \begin{bmatrix} x(u,v) \\ y(u,v) \\ z(u,v) \end{bmatrix}$$
$$s(u,v) = \begin{bmatrix} x(u,v) \\ y(u,v) \\ z(u,v) \end{bmatrix}$$

Typically, u and v are bounded in some way, for example, $0 \leq u \leq 1$, and $0 \leq v \leq 1$, finishing the definition of the surface's domain space. The surface function determines the geometry of the surface by mapping each point in the domain space (u,v) of the function to a corresponding point in 3-dimensional space (x,y,z) . The set of resulting points in (x,y,z) space is the geometry of the surface.--

Please replace the paragraph ~~beginning~~ at page 7, line 1 with the following rewritten paragraph:

--Similarly, a curve in 3-dimensional space may be defined by a parametric function c from \mathbb{R}^1 to \mathbb{R}^3 , which maps points from a 1-dimensional domain space (t) to a 3-dimensional image space (x,y,z). Typically, t is also bounded in some way, such as $0 \leq t \leq 1$. The parametric form for the curve may be expressed as: $c(t) = [x(t), y(t), z(t)]$

$$c(t) = \begin{bmatrix} x(t) \\ y(t) \\ z(t) \end{bmatrix}$$

The curve function determines the geometry of the curve by mapping each point in the domain space (t) of the function to a corresponding point in 3-dimensional space (x,y,z). The set of resulting points in (x,y,z) space is the geometry of the curve.--

Please replace the abstract beginning at page 16, line 3, with the following rewritten abstract:

--Methods for the transformation of shapes in Computer Aided Design (CAD) applications applying a general function composition mechanism ~~with any arbitrary function~~. This method allows the geometry of a shape to be transformed by any generic function while maintaining the topography of the shape. To enable this transformation, the underlying geometry of a shape must either be expressed in terms of surface and curve functions and positions underlying the faces, edges and vertices respectively of the shape, or be capable of being converted into such a representation. Once the underlying geometry of the shape has been represented as a set of functions and positions, the functions and positions are composed with a an arbitrary transformation function to define new surface and curve functions. ~~The positions are merely passed through the transformation function.~~

Once the new functions and positions have been created, the geometry of the transformed shape can be found by passing each point in the domain of each original geometry function through the new transformed function. The resulting set of points is the geometry for the transformed shape. This shape may then be displayed to the user, and the steps of this method repeated for refinement of the transformation function.--